Fuel level senders, testing

The left and right fuel level sending units are wired in series. The fuel gauge receives a signal that is the average of the two input values.

1. Remove rear seat cushion, lift up insulation mats, and remove both fuel tank access covers.

2. Disconnect white plug on each sending unit. See Fig. 6.

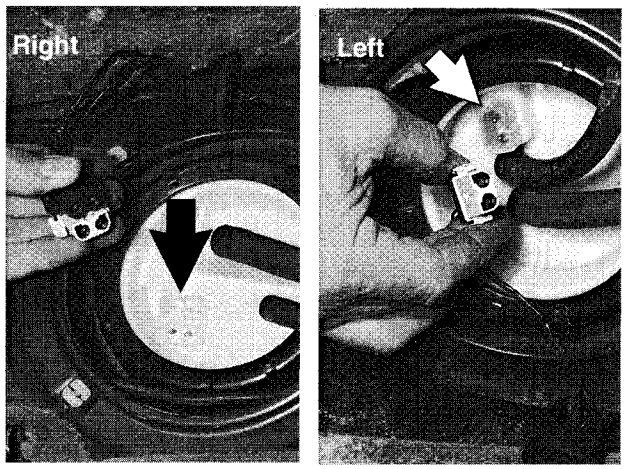

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Fig. 6. Fuel pump/level sender terminal identification. Check resistance at terminals of white connectors (**arrows**).

3. Check resistance value of each sending unit. Values should be the same.

5. If values are different, remove sending units as described below, and check resistance values across terminals. **Table a** lists resistance values for senders at various float positions.

NOTE —

The compensating siphon pump (Fig. 1) maintains the fuel level between the right and left tank lobes. If the resistances are different between the left and right senders, remove the senders and visually inspect the level in each lobe. If the level is different, check the siphon compensating pump.

Table a. Fuel Level Sender Resistances

Float position	Test result (ohms)
Right side empty	10 ohm ± 2
Right side full	250 ohm ± 5
Left side empty	10 ohm ± 2
Left side full	250 ohm ± 5

Fuel level sender (right side) and fuel pump, removing and installing

1. Disconnect negative (–) cable from battery.

CAUTION —

Prior to disconnecting the battery, read the battery disconnection cautions given at the front of this manual on page viii.

2. Drain fuel from tank as described earlier.

WARNING —

Always unscrew the fuel tank cap to release pressure in the tank before working on the tank or lines.

3. Remove rear seat cushion and pull back insulation pad under right side.

4. Remove screws holding right fuel tank access cover. Remove cover.

5. Label fuel hoses. Disconnect hoses and harness connectors from fuel sending unit and fuel pump.

6. Unscrew threaded collar from fuel pump/fuel level sender. Slowly withdraw assembly from tank, allowing fuel to drain off. See Fig. 7.
   - If necessary, push level sender arm toward fuel pump assembly to facilitate removal.

NOTE —

BMW special tool no. 16 1 020 should be used to remove and install the threaded collar. Damage to the collar may result if the special tool is not used

WARNING —

Fuel may be spilled. Do not smoke or work near heaters or other fire hazards.

7. Using a new sealing ring, install pump and sending unit, being sure that fuel line connections point in same direction as they came out.

8. Reconnect harness connector and hoses. Fill tank and check for leaks by running engine. Install access cover and its mounting screws. Reconnect negative (–) cable to battery.

CAUTION —

Before starting the engine, fill the fuel tank with at least 1.5 gallons (5 liters) of fuel. The pump will be damaged if you run it without fuel.